

Claims

WHAT IS CLAIMED IS:

- 1 1. A method to manage secure communications, comprising:
2 establishing a secure session on a secure site with an external client that
3 communicates from an insecure site;
4 detecting access attempts during the session directed to potentially insecure
5 transactions; and
6 transparently managing the access attempts by inspecting the access attempts
7 before making them available to the external client.

- 1 2. The method of claim 1 wherein the detecting further includes translating
2 non-secure links into secure links for the insecure transactions before presenting
3 results of the access attempts to the external client.

- 1 3. The method of claim 1 further comprising:
2 identifying the potentially insecure transactions as attempts by the external
3 client to view a World-Wide Web (WWW) browser page having insecure Hypertext
4 Transfer Protocol (HTTP) reference links or File Transfer Protocol (FTP) reference
5 links embedded therein, and wherein the reference links reside within the secure
6 site; and
7 suppressing normally occurring security warning messages associated with
8 the reference links, preventing the external client from viewing the security warning
9 messages.

- 1 4. The method of claim 1 further comprising:
2 identifying the potentially insecure transactions as attempts by the external
3 client to activate one or more external reference links from a World-Wide Web
4 (WWW) browser page, wherein the external reference links are associated with
5 external sites not controlled by the secure session and not secure; and

6 using a proxy on behalf of the external client during the secure session in
7 order to access the external sites and making transactions with the external sites
8 appear secure to the external client during the secure session.

1 5. The method of claim 1 further comprising:
2 identifying the potentially insecure transactions as attempts by the external
3 client to activate one or more external reference links from a World-Wide Web
4 (WWW) browser page, wherein the external reference links are associated with
5 external sites not controlled by the secure session;
6 inspecting content or metadata of the content associated with the external
7 reference links in advance of providing the external reference links to the external
8 client; and
9 taking zero or more actions based on the inspection before the external
10 reference links are visible, if at all, to the external client during the secure session.

1 6. The method of claim 5 wherein the taking of the zero or more actions further
2 includes at least one action that is at least one or more of:
3 permitting normally occurring security warnings to present messages to the
4 external client by taking no action;
5 removing the external reference links from a browser page that originally
6 included the reference links before presenting the browser page to the external
7 client, thereby preventing external client access to the external reference links;
8 generating for and displaying to a custom warning message that is presented
9 to the external client;
10 issuing alerts, notifications, or advisories to a monitoring entity or log; and
11 determining the external reference links are low-risk to or trusted by the
12 secure site and thereby suppressing normally occurring security warnings from
13 being presented to the external client.

1 7. The method of claim 5 wherein the inspecting the content further includes
2 using a proxy on behalf of the external client during the secure session for

3 performing the inspecting.

1 8. A method to manage secure communications, comprising:
2 detecting potentially insecure transactions occurring during a secure session,
3 wherein the insecure transactions result from actions requested by an external client
4 participating in the secure session;
5 inspecting the potentially insecure transactions in advance of satisfying the
6 actions requested; and
7 making a determination for at least one of the following: permitting the
8 insecure transactions to proceed unmodified by performing the actions requested for
9 the external client, permitting the insecure transactions to proceed in a modified
10 fashion, and denying the insecure transactions by denying the actions requested.

1 9. The method of claim 8 wherein the inspecting further includes, identifying
2 the potentially insecure transactions as a request by the external client to access a
3 World-Wide Web (WWW) browser page having embedded reference links to other
4 browser pages that reside within an environment of the secure session, wherein the
5 reference links are modified in order to suppress normally occurring security
6 warning messages when the browser page is presented to the external client.

1 10. The method of claim 9 wherein the making a determination further includes,
2 permitting the insecure transactions to proceed in the modified fashion by changing
3 the reference links from Hypertext Transfer Protocol (HTTP) insecure links to
4 HTTP over Secure Sockets Layer (HTTPS) in order to suppress the security
5 warning messages.

1 11. The method of claim 8 wherein the inspecting further includes, identifying
2 the potentially insecure requests as an external client access attempt to reference an
3 external site outside the control of the secure session.

1 12. The method of claim 11 wherein the making a determination further includes
2 permitting the insecure transactions to proceed unmodified by permitting normally
3 occurring security warnings to be presented to the client before satisfying the
4 external client access attempt to reference the external site.

1 13. The method of claim 11 wherein the making a determination further includes
2 permitting the insecure transactions to proceed in a modified fashion by
3 transparently processing the external client access attempt within a proxy making
4 the external client access attempt appear to be part of the secure session.

1 14. The method of claim 11 wherein the making a determination further includes
2 denying the insecure transactions after determining that the external client access
3 attempt is corrupted and notifying the external client of the denial.

1 15. The method of claim 11 wherein the making a determination further includes
2 denying the insecure transactions after determining that the external client access
3 attempt is corrupted and logging information about the external client access
4 attempt.

1 16. A secure communications management system, comprising:
2 a secure communications manager that manages a secure session with an
3 external client associated with an insecure site; and
4 a proxy that interacts with the secure communications manager in order to
5 inspect potentially insecure communications requested by the external client during
6 the secure session, and wherein the proxy selectively processes the potentially
7 insecure communications on behalf of the external client within the secure session.

1 17. The secure communications management system of claim 16 wherein the
2 secure communications manager translates Hypertext Transfer Protocol (HTTP)
3 insecure communications into HTTP over Secure Sockets Layer (HTTPS) secure
4 communications during the secure session.

1 18. The secure communications management system of claim 16 wherein the
2 proxy selectively modifies a number of the potentially insecure communications and
3 permits them to proceed thereby suppressing normally occurring security warning
4 messages that the secure communications manager issues.

1 19. The secure communications management system of claim 16 wherein the
2 proxy selectively leaves a number of the potentially insecure communications
3 unchanged and permits secure communications manager to issue security warning
4 messages to the external client.

1 20. The secure communications management system of claim 16 wherein the
2 proxy selectively denies a number of the potentially insecure communications to
3 proceed and at performs at least one of reports the denial to another entity and
4 records the denial in a log.

1 21. The secure communications management system of claim 16, wherein the
2 proxy selectively issues custom warning messages or explanations to the external
3 client regarding a number of the potentially insecure communications.

1 22. A secure communications management system, comprising:
2 a secure session; and
3 secure reference links accessible within the secure session; and
4 potentially insecure reference links accessible from the secure session;
5 wherein an external client associated with an external site establishes the
6 secure session with a secure site, the external client references the secure reference
7 links and the potentially insecure reference links during the secure session, and
8 wherein the potentially insecure reference links are inspected and modified in
9 advance of being made available to the external client during the secure session.

1 23. The secure communications management system of claim 22 further
2 comprising a proxy that inspects and modifies the potentially insecure reference
3 links in advance of making them available to the external client during the secure
4 session.

1 24. The secure communications management system of claim 22 wherein the
2 secure session is represented within a Word-Wide Web (WWW) browser that the
3 external client uses for interacting with the secure site.

1 25. The secure communications management system of claim 22 wherein the
2 potentially insecure reference links are transparently modified into a number of the
3 secure reference links before being made available to the external client during the
4 secure session.

1 26. The secure communications management system of claim 22 wherein a
2 number of the potentially insecure reference links are processed by a proxy on
3 behalf of the external client and appear to the external client to be a number of the
4 secure reference links.

1 27. The secure communications management system of claim 22 wherein
2 normally occurring security warning messages associated with a number of the
3 potentially insecure reference links are suppressed and not visible to the external
4 client during the secure session.

1 28. The secure communications management system of claim 22 wherein a
2 number of the potentially insecure reference links are not made available to the
3 external client during the secure session.

4 29. The secure communications management system of claim 22 wherein a
5 number of the potentially insecure reference links generate notifications to external
6 entities.

1 30. The secure communications management system of claim 22 wherein a
2 number of the potentially insecure reference links generate written messages to a
3 security log.